

ACEC-DOT BRIDGE SUBCOMMITTEE

Minutes of November 7, 2005 Meeting

Attendees:

Allen Raynor, NCDOT
Lonnie Brooks, NCDOT
Kevin Apstin, BHME
David Ruggles, Stewart Engineering (Co-Chair)
Tim Rountree, RWA
Tom Tallman, WSA
Domenic Coletti HDR Engineering

I. 2006 Outlook

The anticipated bridge work that NCDOT plans to advertise in 2006 is as follows:

- R-2554 BA Goldsboro Bypass, to be advertised in spring
- X-2B and U-2519DA, Fayetteville Outer Loop to be advertised in spring
- R-2301, New Bern Bypass to be advertised in June or July
- U-2579B, eastern Winston Salem Bypass, to be advertised in December
- Wilmington Bypass, to be advertised in December if let date holds

Design Build Work:

- R-4463, NC 43 connector in Craven County is slightly off track due to 4A concurrence issues, is expected to be back on track soon.
- R-2813B, Long Shoals Road in Buncombe County, let June 2006

There is expected to be \$650M +- of work let to construction in 2006, a similar amount in 2007, and spending should begin increasing in 2008.

II. Joint Training Opportunities

A seminar on LRFD substructure design is being planned for the near future. This is a NHI / FHWA initiative, so they have to get the course outline set up before a date can be established .•

There was a discussion about setting up a workshop for NCDOT structure personnel and consultants to discuss design methodologies for new products or structure types that are introduced. An example would be integral end bents or prestressed box beams. The purpose of the workshop would be to ensure that the design approach used by engineers (NCDOT and PEF) are consistent. The workshop would be open to a maximum of one participant from each PEF and designated NCDOT personnel, to prevent the group size

from getting too big. The workshop could be held at a meeting place that would cater a lunch, with a participation fee. The workshop would possibly allow PDH credit for participating engineers ..

III. Bridge Policy Changes

There are several new policy memos that have been issued since ~e August meeting:

Bridge Overlays - Describes when to use concrete overlay or asphalt overlay for cored slab and box beam bridges.

Bridge Approach Slabs - Describes when to use 15 feet long approach slabs and when to use 25 feet long approach slabs.

Design Manual Figures - Figures were revised to eliminate interference with middle "E" bars and guardrail anchor assembly.

Coast Guard Permit Sketches - No longer require chief engineer signature.

Steel Pipe Piles - New Standard Drawings have been developed and are available.

Diaphragms for Prestressed Girders -Steel Diaphragms are now the default intermediate diaphragm for Type II, III, and IV Girders.

All of these memos are available on the Structure Design Web Page at:

<http://www.doh.dot.state.nc.us/preconstruct/hi2hwav/structur/polmemo/>

In addition, there will be a future policy memo for integral abutments out in the next few months. Also, NCDOT is in the process of establishing a minimum flange thickness to provide flange stability for steel girders during shipping. The 2005 interim Structure Design Manual Revisions will be out shortly.

IV. Design Build Unit and Status of upcoming Design-Bid-Build/Design-Build

Design build Information is available on the Project services Unit Web page at:

http://www.ncdot.org/doh/preconstruct/altern/design_build/default.html

V. LRFD Specifications

The deadline for implementation of LRFD is October 2007. The Structure Unit is continuing the process of conversion to LRFD. They have completed rewriting the software for prestressed girders and still working on software for box beams and cored slabs. They have done some work on deck slab design, with the goal being to establish tables similar to the present Structure Design Manual. For substructure design, the goal is to use RC Pier as a short term solution while LRFD substructure issues are being addressed. The ultimate goal is for the Structure Design Unit and the Geotechnical Unit to have a consistent methodology for soil / structure interaction. The Structure Design Manual will be revised to be compatible with LRFD specifications sometime in 2007.

VI. Next Meeting

The next bridge subcommittee meeting will be on **Monday February 6, 2006** at 9:00 a.m. in Structure Design Conference Room B.